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## **Non-perturbative production rate of photons with a lattice quark propagator –effect of vertex correction –**

*Thursday 2 June 2016 15:00 (30 minutes)*

We analyze the production rate of photons from the deconfined medium with a quark propagator obtained from a lattice QCD numerical simulation. We calculate the production rates non-perturbatively at two temperatures above  $T_c$ . The photon-quark vertex is determined gauge-invariantly so as to satisfy the Ward-Takahashi identity. It is found that the vertex correction modifies spectra quantitatively. The photon production rate shows a peculiar structure reflecting the dispersion relations and kinematics of quasi-particles. We discuss the origin of this structure.

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